

Appl. No. 10/710,923  
Docket No. 158982 / GEM-0053-P

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### AMENDMENTS TO THE SPECIFICATION

Please amend Paragraphs [0021] and [0051] as follows.

[0021] Figure 1 depicts a generalized schematic of an imaging system 100 for use in medical intervention procedure planning, such as, for example, bi-ventricular procedure planning, atrial fibrillation procedure planning, or atrial flutter procedure planning. The imaging system 100 includes: a medical scanner system 110 for generating cardiac image data, such as, for example, image data of the left atrium, the left ventricle, the right atrium and the coronary sinus, a data acquisition system 120 for acquiring the cardiac image data from medical scanner system 110, an acquisition database 130 for storing the cardiac image data from data acquisition system 120, an image generation system 140 for generating a viewable image from the cardiac image data stored in acquisition database 130, an image database 150 for storing the viewable image from image generation system 140, an operator interface system 160 for managing the medical scanner system 110 and the cardiac image data and viewable image in databases 130, 150, which may be combined into one database, and a post-processing system 180 for analyzing and displaying the viewable image in database 150 and being responsive to operator interface system 160. Post-processing software in post-processing system 180 includes instructions, and is therefore adapted, to analyze data and display images, thereby converting post-processing system 180 from a general post-processor into a specialized post-processor. Scanned data that is capable of being converted into a viewable image is referred to herein as image data.

[0051] ~~Acquisition protocol~~In reference to Figures 5 and 6, a cardiac helical acquisition was used with retrospectively EKG-gated reconstruction on a 4/8/16/32+ detector row multi-slice scanner. Example scanner parameters were set at 120kv, 350mA, 0.5sec rotation period, 0.3 helical pitch factor, 1.25 or 0.625mm slice thickness, with segmented reconstruction at 75% cardiac phase location. Scan orientation was

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primarily from the bottom of the heart towards the top in order to acquire the more critical data early in the acquisition (considering patient motion, breathing, for example). Prior to the cardiac helical scan, a timing bolus acquisition was performed to determine the optimal preparation delay (the time between the beginning of contrast injection and the start of the cardiac helical scan). Following the scan and reconstruction of the cardiac images, and where motion artifacts were seen in the images, a multiphase reconstruction was prescribed over the full heart cycle. Phase location was selected at around 45% when the patient experienced arrhythmia during the scan. Multi-sector reconstruction may be employed where motion artifacts were still seen. The selection of a multi-sector reconstruction procedure may be facilitated using a multiphase post processing 3D viewer. The most optimal set of images (best phase, best reconstruction type, for example) were selected, and then post processing segmentation was performed as defined by the specific 3D protocol for the anatomical landmark under study (the right atrium, coronary sinus, for example).